CLAIMS

What is claimed is:

1.   A method for managing a directory comprising the steps of:

creating a template to define the directory comprising one or more definitions corresponding to one or more object types, wherein for a given one of said object types, said corresponding definition identifies zero or more others of said object types that should be automatically created and added to the directory whenever said given object type is added to the directory;

      creating an object of said given type;

      adding said object of said given type to the directory;

      automatically creating zero or more objects of said others of said object types; and

      adding said zero or more objects to the directory.

2.   The method of claim 1, wherein said zero or more objects of said others of said object types are added as children to said object of said given type in the directory.

3.   The method of claim 1, wherein said one or more object types are Java object types.

4.   The method of claim 1, wherein said one or more definitions comprise one or more attributes.

5.   The method of claim 4, wherein said one or more attributes have values.

6.   The method of claim 1, wherein said step of automatically creating zero or more objects comprises the steps of:

      selecting one of said definitions that corresponds to said given type of said object that is created; and

      reading said zero or more others of said object types from said selected definition.

7. The method of claim 1, wherein said template is created using a markup language.

8. The method of claim 7, wherein said markup language is one or more of the following:

an extensible markup language; and

a generalized markup language.

9. The method of claim 7, wherein said markup language is the Extensible Markup Language.

10. A template for managing a directory comprising:

one or more definitions corresponding to one or more object types, wherein for a given one of said object types, said corresponding definition identifies zero or more others of said object types of zero or more objects that should be created whenever an object of said given object type is added to the directory.

11. The template of claim 10, wherein said one or more object types are Java object types.

12. The template of claim 10, wherein said one or more definitions comprise one or more attributes.

13. The template of claim 10, wherein said one or more attributes have values.

14. A method for managing a directory of one or more entries comprising the steps of:

creating a template to provide one or more instruction on how to manage the directory;

creating at least one of the entries; and

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adding said at least one entry to the directory in accordance with at least one of said instructions.

15.   The method of claim 14, further comprising the step of:

deleting said at least one entry from the directory in accordance with said instruction.

16.   The method of claim 14, wherein said one or more instructions comprise one or more definitions corresponding to one or more entry types wherein for a given one of said entry types, said corresponding definition identifies zero or more of said entries that must be added to the directory whenever an entry of said given type is added to the directory.

```xml
1  <!-- Defines the organization entry structure -->,
2
3  <ServiceConfig>
4      <ServiceSubConfig name="templates">
5        <ServiceSubConfig name="StructureTemplates">
6            <ServiceSubConfig name="Organization" id="StructureUmsObjects">
7              <AttributeValuePair><Attribute name="class"/>
8                  <Value>com.iplanet.ums.Organization</Value>
9              </AttributeValuePair>
10             <AttributeValuePair><Attribute name="name"/>
11                 <Value>o=org</Value>
12             </AttributeValuePair>
13             <AttributeValuePair><Attribute name="childNode"/>
14                 <Value>OrganizationalUnit</Value>
15                 <Value>PeopleContainer</Value>
16             </AttributeValuePair>
17             <AttributeValuePair><Attribute name="template"/>
18                 <Value>BasicOrganization</Value>
19             </AttributeValuePair>
20             <AttributeValuePair><Attribute name="filter"/>
21                 <Value>(o=org)</Value>
22             </AttributeValuePair>
23             <AttributeValuePair><Attribute name="priority"/>
24                 <Value>0</Value>
25             </AttributeValuePair>
26           </ServiceSubConfig>
27
28
29  <!-- Defines "Groups" Organizational Unit entry -->
30
31             <ServiceSubConfig name="Organizational Unit" id="StructureUmsObjects">
32               <AttributeValuePair><Attribute name="class"/>
33                   <Value>com.iplanet.ums.OrganizationalUnit</Value>
34               </AttributeValuePair>
35               <AttributeValuePair><Attribute name="name"/>
36                   <Value>ou=Groups</Value>
37               </AttributeValuePair>
38               <AttributeValuePair><Attribute name="childNode"/>
39                   <Value>DomainAdminGroup</Value>
40                   <Value>DomainHelpDeskAdminGroup</Value>
41               </AttributeValuePair>
42               <AttributeValuePair><Attribute name="template"/>
43                   <Value>BasicOrganizationalUnit</Value>
44               </AttributeValuePair>
45
```

Table 1

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```
46          <AttributeValuePair><Attribute name="filter"/>
47              <Value>(ou=Groups)</Value>
48          </AttributeValuePair>
49          <AttributeValuePair><Attribute name="priority"/>
50              <Value>0</Value>
51          </AttributeValuePair>
52          </ServiceSubConfig>
53
54
55  <!-- Defines DomainAdminGroup entry -->
56
57          <ServiceSubConfig name="DomainAdminGroup" id="StructureUmsObjects">
58          <AttributeValuePair><Attribute name="class"/>
59              <Value>com.iplanet.ums.StaticGroup</Value>
60          </AttributeValuePair>
61          <AttributeValuePair><Attribute name="name"/>
62              <Value>cn DomainAdminGroup</Value>
63          </AttributeValuePair>
64          <AttributeValuePair><Attribute name="template"/>
65              <Value>BasicGroup</Value>
66          </AttributeValuePair>
67          <AttributeValuePair><Attribute name="filter"/>
68              <Value>(cn=DomainAdminGroup)</Value>
69          </AttributeValuePair>
70          <AttributeValuePair><Attribute name="priority"/>
71              <Value>0</Value>
72          </AttributeValuePair>
73          </ServiceSubConfig>
74
75
76  <!-- Defines DomainHelpDeskAdminGroup entry -->
77
78          <ServiceSubConfig name="DomainHelpDeskAdminGroup"
79          id="StructureUmsObjects">
80          <AttributeValuePair><Attribute name="class"/>
81              <Value>com.iplanet.ums.StaticGroup</Value>
82          </AttributeValuePair>
83          <AttributeValuePair><Attribute name="name"/>
84              <Value>cn DomainHelpDeskAdminGroup</Value>
85          </AttributeValuePair>
86          <AttributeValuePair><Attribute name="template"/>
87              <Value>BasicGroup</Value>
88          </AttributeValuePair>
89          <AttributeValuePair><Attribute name="filter"/>
90              <Value>(cn=DomainHelpDeskAdminGroup)</Value>
91          </AttributeValuePair>
```

Table 1

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```
92          <AttributeValuePair><Attribute name="priority"/>
93              <Value>0</Value>
94          </AttributeValuePair>
95          </ServiceSubConfig>
96
97
98   <!-- Defines a People Container entry -->
99
100         <ServiceSubConfig name="PeopleContainer" id="StructureUmsObjects">
101         <AttributeValuePair><Attribute name="class"/>
102             <Value>com.iplanet.ums.PeopleContainer</Value>
103         </AttributeValuePair>
104         <AttributeValuePair><Attribute name="name"/>
105             <Value>ou=People</Value>
106         </AttributeValuePair>
107         <AttributeValuePair><Attribute name="template"/>
108             <Value>BasicPeopleContainer</Value>
109         </AttributeValuePair>
110         <AttributeValuePair><Attribute name="filter"/>
111             <Value>(ou=People)</Value>
112         </AttributeValuePair>
113         <AttributeValuePair><Attribute name="priority"/>
114             <Value>0</Value>
115         </AttributeValuePair>
116         </ServiceSubConfig>
117      </ServiceSubConfig>
118      </ServiceSubConfig>
119   </ServiceConfig>
```

Table 1

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```
1 public class PersistentObject implements ISearch, Serializable, IUMSConstants
2 {
3   o
4   o
5   o

6     public void addChild( PersistentObject object ) throws AccessRightsException,
7       EntryAlreadyExistsException, UMSException {
8   o
9   o
10  o
11      if (object == null) {
12  o

13  o
14  o
15      DataLayer.getInstance().addEntry( getPrincipal(), childGuid, object.getAttrSet()
16 );
17
18      object.setModSet( null );
19      object.setPrincipal(getPrincipal());
20
21      EntityManager em = EntityManager.getEntityManager();
22      try {
23         em.execute(getPrincipal(), object, m_guid);
24      } catch (UMSException e) {
25         // TODO - we should log error...
26         if (debug.isMessageEnabled()) {
27            debug.message("PersistentObject.addChild : UMSException : "+
28            e.getMessage());
29         }
30      }
31    }
32  o
33  o
34  o
```

Table 2

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